EXHIBIT P

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

NICOLE MORRISON, as Administrator for the Estate of Roberto Grant, and NICOLE MORRISON, as Mother and Legal Guardian for the Property of AG and SG, Decedent's Minor Children,

Plaintiffs,

-against-

Civil Action No. 17 Civ. 6779 (WHP)

UNITED STATES OF AMERICA, FEDERAL BUREAU OF PRISONS, CORRECTION OFFICER KERN, EXECUTIVE ASSISTANT LEE PLOURDE, and JOHN AND JANE DOE(s) AGENTS, SERVANTS AND EMPLOYEES OF THE DEFENDANTS,

Defendants.

DEPOSITION OF ZHONGXUE HUA, M.D., a Witness herein, taken by Defendants, pursuant to Notice, via Zoom, on Friday, March 26, 2021, at 1:00 p.m., before Monique Cabrera, a Shorthand Reporter and notary public, within and for the State of New York.

A P P E A R A N C E S :

UNITED STATES DEPARTMENT OF JUSTICE
UNITED STATES ATTORNEY'S OFFICE
Attorney for Defendants
86 Chambers Street
New York, New York 10007

BY: JENNIFER SIMON, AUSA

Law Office of ANDREW C. LAUFER, PLLC
Attorney for Plaintiffs
246 West 40th Street
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New York, New York 10018

BY: ANDREW C. LAUFER, ESQ.
alaufer@laufer.com

* * *

IT IS HEREBY STIPULATED AND AGREED that all objections, except as to the form of the questions, shall be reserved to the time of the trial;

IT IS FURTHER STIPULATED AND AGREED that the within examination may be subscribed and sworn to before any notary public with the same force and effect as though subscribed and sworn to before this court.

Dr. Hua

Whereupon,

ZHONGXUE HUA,

after having been first duly sworn by the Court Reporter, was examined and testified as follows:

COURT REPORTER: Can you please state your name and address for the record.

THE WITNESS: Zhongxue Hua; last name H U A; first name Z H O N G X U E, 415 Main Street, New York, New York 10044.

EXAMINATION

BY MS. SIMON:

Q. Good afternoon, Dr. Hua, how are you?

A. Good morning.

Q. I am the AUSA assigned to this matter. I represent the United States. I am going to be asking you some questions today. As you can see, we are doing this as a video deposition, so if you could make sure to let me finish asking questions before you answer and I will do my best to wait until you finish speaking before I ask the next question.

A. Sure.

Q. Thank you.

Dr. Hua

And if you could also make sure all of your answers are verbal, that will also be helpful for the Court Reporter.

If I ask a question and you don't understand, please let me know. If you answer, I will assume that you understand. Okay?

A. Sure.

Q. Do you understand that you are speaking under oath and are sworn to tell the truth?

A. Yes.

Q. Is there any medication or any other reason why you feel you cannot testify truthfully today?

A. No.

Q. I would like to mark -- let me know if I should e-mail it -- a copy of the disclosure on his report. Do you have that in front of you or should we e-mail it?

A. Yes, I have it in front of me.

MS. SIMON: Off the record.

(Government Exhibit A was so marked for identification as of this

date.)

MS. SIMON: Back on the record.

Q. If you could turn to Exhibits B of this document, please?

MR. LAUFER: She is referring to your report, Doctor.

THE WITNESS: Okay.

MR. LAUFER: He has his report in front of him. I don't know if he has the plaintiffs' disclosure in front of him.

MS. SIMON: Off the record again.

(Discussion held off the record.)

MS. SIMON: Back on the record.

BY MS. SIMON:

Q. Looking at what we have marked as Exhibit A, if you could turn to Exhibit B in that document.

MR. LAUFER: The CV; right?

MS. SIMON: Yes.

Q. Do you recognize the document, Dr. Hua?

A. Yes.

Q. What is it?

A. It's a CV I submitted.

Q. And is it an accurate CV?

A. To the best of my knowledge.

Q. Is there any more current information that is not included in this CV?

A. Nothing on top of my head, no.

Q. What professional licenses do you currently hold?

A. It's only medical license in New York, New Jersey, Pennsylvania, Rhode Island and Connecticut. I am not sure I am renewing the Connecticut license or not. It hasn't been used for a while.

Q. Any other professional licenses?

A. No.

Q. Have any of these professional licenses ever been suspended or revoked?

A. No.

Q. Are you board certified?

A. Yes.

Q. In what?

A. I am in three different areas. One in anatomical pathology, forensic pathology and neuro pathology.

Q. What was the second one?

A. Forensic pathology.

Q. And in those three subject matters, do you focus on a subspecialty or not?

A. Actually, forensic pathology -- both forensic pathology and neuro pathology are considered subspecialties.

Q. Then, looking at the second page of your CV, I see a list of publications?

A. Yes.

Q. Is that accurate and up to date?

A. To the best of my knowledge, yes.

Q. Are there any articles that you have authored or co-authored that aren't on this list?

A. To the best of my knowledge, if I remember I put it in, that's all I can say.

Q. Are any of the articles or other presentations in this list relevant to the opinions that you are providing in this case?

A. This case is about forensic pathology. Most articles are related to, the presentation relates to forensic pathology except several of them, I mean there are several of them early on in my career that are

dealing with anatomical pathology and forensic pathology.

Q. So it's your position that all of them are relevant to your opinion in this case?

A. All of them are pathology related, some of them are more focused forensic pathology; some are purely anatomical pathology.

Q. My question is whether any of the articles or publications are relevant to the issues that are particular to Mr. Grant's death, though; are any of them?

A. If we're dealing with autopsy, which ended overhead in pathology, I would think most of them are relevant, just to the degree of relevancy, small or bigger; that's the argument that can be made.

Q. Did you review any of these articles or publications while you were preparing your report in this case?

A. Not to my knowledge or recollection.

Q. Then looking at Exhibit C of this document, do you recognize this list?

A. Yes.

Q. What is it?

A. It's a list I submitted in, it must be early 2020, of the cases that I was involved in either depositions or trials for the more recent years.

Q. Since you prepared this list, have you testified at trial or in a deposition on any case?

A. Let me, since I am sitting in front of the computer -- no -- oh, yes, there is one deposition I made in September of 2020 in Middletown, regarding a case in Middletown, New York, New York State. It's a video deposition sometime in September 2020.

Q. Any other recent cases that are on this list?

A. Not to my knowledge or recollection.

Q. In your capacity as an expert in these cases are you typically retained in civil cases or criminal cases?

A. Both.

Q. And are you typically retained, your civil cases, are you typically retained on

behalf of plaintiffs or defendants?

A. Both sides.

Q. One more frequent than the other or about equal?

A. Not to my particular recollection; it's similar.

Q. You have been retained as an expert by plaintiffs' counsel in this case; correct?

A. Yes, in March of last year.

Q. And in connection with that retention, what services did you agree to provide?

A. I was asked to review sets of records of opinion. I reviewed, wrote my report, submitted accordingly.

Q. Is there a written agreement regarding the services you are providing in this case?

A. I didn't hear you.

Q. Was there a written agreement regarding the services you're providing in this case?

A. Not on my side. I did receive a cover letter from Mr. Laufer's law firm.

Q. How much are you getting paid for those services in this case?

A. For the review and the report, a standard fee of $4,500.

Q. How much have you billed so far?

A. $4,500 plus the deposition, it's ongoing as of now. It's a $3,500 flat fee.

Q. Are you entitled to any fees based on the outcome of the case?

A. No.

MS. SIMON: Off the record.

(Government Exhibit B was so marked for identification as of this date.)

MS. SIMON: Back on the record.

BY MS. SIMON:

Q. I am showing you what we have marked as Government Exhibit B. Do you recognize this document?

A. Except for the first two pages, yes.

Q. Understood.

By the "first page" you are referring to the cover letter?

A. Yes.

Q. The cover letter that's from my office and the second page is the certifications of business records; those two pages you don't recognize; correct?

A. First one definitely I do not recognize. The second one, I have no specific recollection.

Q. So then turning to the third page that's titled "Report of Autopsy," do you recognize that document?

A. Yes.

Q. And is this the autopsy record that you reviewed in connection with this case?

A. Yes.

Q. Do you disagree with any of the findings or conclusions of the medical examiner, Jennifer Hammers, in this report?

A. I agree with it.

Q. Looking at the second page of the autopsy report, Roman Numeral V; do you disagree where it says "Hypertensive Cardiovascular Disease"?

A. Yes.

Q. Are you familiar with that condition?

A. Yes.

Q. What is it?

A. It basically means someone's blood pressure is high.

Q. And with an individual who is alive, what are the symptoms or signs of hypersensitive cardiovascular disease?

A. It really depends on whether you have a slight, moderate, or severe hypertension. In this case, under Dr. Hammers' report on page number 8, there is microscopic examination of the heart tissue, which specifically indicated the slight changes.

So it's a disease Mr. Grant has. The question is whether he died of the disease or died with the disease.

Q. I don't think you answered my question.

MS. SIMON: Monique, do you mind just reading it back?

(The last question was read by the Reporter.)

A. It depends on if you're dealing with early-stage slight, middle-stage moderate or

end-stage severe heart disease or hypertension. It's a spectrum. Early stage barely has much symptom at all. Certainly, late stage is different. In this case, according to Dr. Hammers' report, we're dealing with early stage of heart disease.

Q. Let's take those one at a time. What are the symptoms you might see in an individual who is alive with what you would refer to as light hypertensive cardiovascular disease?

A. You can have no symptoms at all. You can have symptoms, just some mild chest uncomfortableness, headache, very mild. It really depends on -- it's really misleading to say what's a hypertension system. What it depends on is which stage of hypertension you are dealing. I have hypertension and I don't have any symptoms.

Q. In an individual who has the slight version of this disease, other than chest pain or headache, what other symptoms might they show?

A. Slight usually do not even have chest

pains. In this case, microscopic. There was no evidence of a heart attack.

Q. If an individual with a slight version of this disease is showing symptoms, what symptoms might they show other than -- we are speaking now about an individual who has a slight, to use your term, a slight version of this disease and you have mentioned that an individual can have no symptoms or an individual might have other symptoms, and you have mentioned central chest pain, potentially a headache.

My question is: In an individual with a slight hypertensive cardiovascular disease, what symptoms might they show?

MR. LAUFER: Objection. I think he said that already. I will allow him to answer.

A. I think you're misquoting. Slight disease usually does not have symptoms. Also, it depends on whether one is treated for hypertension or not. If you're treated, control your blood pressure, you certainly do not have blood-pressure related symptoms.

Q. Do I understand you correctly, that an individual with slight hypertensive cardiovascular disease typically shows no symptoms? I want to make sure I understood you, that's all.

A. No symptoms or nearly no symptom.

Q. Thank you.

A. Another way to say it: It's irrelevant to his or her cause of death. It's a disease. You live with it, you die with it, as compared to die of your slight hypertension.

Q. In an individual with moderate hypertensive cardiovascular disease, what symptoms would such an individual show?

A. It really depends. "Moderate" means blood pressure goes to a certain threshold. Which is followed by the next question: Was someone being treated, either treated with medication or diet controlled, exercise to cure your symptoms. It really depends on the actual measurement of the blood pressure, whether it has other conditions interfering that cause more hypertension or not.

Q. In an individual with moderate hypertensive cardiovascular disease, who is not being treated for that disease, what symptoms might they show?

A. It really depends on what your definition of "moderate hypertension" is. If you can give me a blood-pressure number, symptoms, and I would answer accordingly.

Q. I am using your term, "slight, moderate and severe." What did you mean by moderate hypertensive cardiovascular disease?

A. I would say "moderate" is someone who needs a medical intervention. "Slight" is a lower degree. You can use non-medical to control your blood pressure or with minimum medical intervention, as compared to people with "severe," who are constantly adjusting medication, constant measurement, under doctor's care to control your disease.

Hypertension can cause damage to your organs, whether you have any organ damage, specifically heart damage, and brain damage and kidney damage and a heart attack and a stroke.

Q. Using your definition of a moderate hypertensive cardiovascular disease, what are the symptoms an individual might show with that condition?

A. When blood pressure is high enough --

Q. Untreated, I should say.

A. When blood pressure is high enough, untreated by a physician and adjusted by his or her own lifestyle, which certainly would present a problem, you would expect significant enlargement, progressing enlargement of the heart.

You would expect heart muscle, as microscopic changes and with ischemia changes and with small scar formation in the heart muscle and a stroke -- some can be very small -- and whoever has the disease is probably not even aware of it. Certainly in this case, the autopsy performed or if you're alive the radiologist's scan performed, you could certainly have a better sense of any end-organ damage, specifically heart, brain and kidneys.

Q. Any other symptoms an individual might show with -- I am talking about an

individual who is alive, by the way -- any other symptoms that an individual with moderate hypertensive cardiovascular disease might show?

A. Treated or untreated?

Q. Untreated.

A. How many years you have this disease. Organ damage will never recover by itself. Early stage certainly do not have organ damage, it's still a recoverable, reversible process, as compared to end stage, end stage of the moderate-type of hypertension where they already have end-organ damage.

If a stroke happens, it's a stroke. If heart has lack of oxygen, lack of blood supply, has ischemia or myocardial infarction, has kidney damage. It depends on at which stage it's really.

I mean, really, not only the severeness of the blood-pressure measurement, also what's the duration of this kind of high blood pressure being in this particular person.

Q. If I understand you correctly, you

are saying it depends on whether they are in the early stages of the disease or whether they have had it for a time; correct?

A. The duration of -- I mean, slight or moderate depends on what's the pressure measurement and, also, depends how many years you have had this disease. If there's been any medically intervention or not.

Any medical intervention basically is to lower your blood pressure based on to prolong the lifespan. I mean, no one is killed with the disease after the age of 100.

Q. Well, what blood-pressure measurement do you consider to be moderate hypertensive cardiovascular disease?

MR. LAUFER: Objection.

You can answer, Doc.

A. It's evolved over the years.

When I was in medical school 25, 30 years ago, the blood pressure now more is 140 to 90. Over the years it's become 130 to 90. Right now it's really become 120 to 80.

It's an evolving concept and really based on the doctors, scientists understanding

of what's the end-organ damage, how to reverse the process, whether it contributes to your blood pressure, cannot reverse, slow down the progression of your hypertension or not.

It's a complex process. I do not really have a one-sentence answer, if that's what you are looking for.

Q. Other than organ damage in an individual with moderate hypertensive cardiovascular disease, what symptoms might they show though if left --

A. People can get untreated, not taking care of themselves, using drugs, using alcohol, heavily smoking at the same time. It certainly will precipitate the disease process much quicker and symptom wise. You would except people would have early symptoms of lack of blood supply to your heart. You develop arrhythmia, which is abnormal blood rhythm. You can have kidney damage to a certain degree.

It really depends how old are you; how many decades you have the disease; you can have a stroke of various size and shape and,

again, it depends on which kind of degree of hypertension you have and how many years, how many decades you have.

Q. Any other symptoms that an individual might have with moderate hypertensive cardiovascular disease left untreated than the ones you have already mentioned?

A. People can have damage to the brain, damage to the heart, damage to the kidney. Damage to the kidney has sets of kidney -- damage of brain has sets of brainwave symptoms. Damage of heart can have a set of heart-related symptoms.

Q. Any other symptoms?

A. If under doctor's observation, certainly you have a better chance to observe and control and manage your symptoms.

Q. That's not my question. My question is: Other than the symptoms you have already mentioned, are there any other symptoms an individual with --

A. Certainly have miscellaneous --

MR. LAUFER: It's okay, Doctor, but let counsel finish her question first, then

begin your response. Because you are going to drive the Court Reporter nuts.

MS. SIMON: Let me ask the whole question on the record.

Q. My question is: Other than the symptoms you have already mentioned, are there any other symptoms an individual with moderate hypertensive cardiovascular disease might show if the diseased is left untreated, other than the symptoms you have already mentioned?

A. I would generally describe as -- untreated hypertension really depends how long the duration you have this kind of moderate hypertension.

In terms of symptoms, you would expect three sets of symptoms: One related to the brain, one related to the heart, and one related to the kidney.

MR. LAUFER: So aside from what you already said, I think what counsel is looking for, are there any other things --

MS. SIMON: That's all right.

THE WITNESS: That's three major things on top of my head.

Q. In your practice as a medical examiner, have you examined individuals who have died of hypertensive cardiovascular disease?

A. Yes.

Q. In those cases, what was the basis of your conclusion that an individual died of that disease?

A. It would be a biased population. As a medical examiner we are dealing with people who die of hypertensive or die for some other reasons unrelated to hypertension. I am not sure of exactly the question you are asking.

MS. SIMON: Can you please read back the question, Monique?

(Last question read by the Reporter.)

A. Individual died of hypertension: By definition you have the people who have severe hypertension, untreated hypertension, mainly dealing with people with hypertension for prolonged period of times, mainly has end-organ damage. It's not hypertension itself, it's the brain damage; it's heart-related damage; it's kidney-related damage.

Dr. Hua

Again, in heart-related damage it involves vascular rupture. Yes, that's pretty much it.

Q. Is enlargement of the heart a possible indication that someone died of hypertensive cardiovascular disease?

A. It's the degree of the enlargement of heart. Enlargement of heart will suggest someone has hypertension or other reasons has -- other reasons causing it, not hypertension-related enlarged heart.

It's the degree of enlargement. It's the measurement of the enlargement. More importantly, it's the microscopic section which enlarged the heart tissue but by several hundred fold; see, any previous evidence of lack of blood-pressure supply and previous scar formation are due to heart attack which was not in this case.

MS. SIMON: Monique, could you read my question back.

(Last question read by the Reporter.)

A. An enlarged heart just suggests someone could have hypertension, which has no

direct or close correlation regarding someone who dies of hypertension. That's an entirely different issue. It's one thing if you have the disease, die with the disease or if you die of the disease.

Q. I am trying to figure out a way to understand your views of what an individual who has died of this disease might show in an autopsy. It would really help if you could just answer the questions I am asking.

A. I am --

Q. Let me finish please.

I am not trying to accomplish anything else except to understand your opinions on a particular issue. So if you could, number one, just answer the question I am posing; and number two, make sure I finish my question. I think this will go a lot faster. Let me ask again.

MR. LAUFER: One thing is that sometimes at the end of your questions, counsel, you pause a little bit, which I think leaves an opening for him to start answering. If you can just try not to pause, that might

help.

Q. Again, if we could make sure I have stopped talking before you answer, Dr. Hua. I think there have been several times where you started talking in the middle of a sentence. If we could just do that this would all go a lot faster and please, again, just answer the question I am asking and it will be a bit easier on all of us.

You have mentioned that you have, in your practice as a medical examiner, certified for individuals who have died of hypertensive cardiovascular disease; correct?

A. Yes. It's a diagnosis exclusion.

Q. Did you say a "diagnosis exclusion"?

A. No other disease, no other overriding disease, no other trauma, no other intoxication, because hypertension by definition is a natural disease.

As a forensic pathologist in this country, probably in most countries as well, we define a natural disease as exclusively natural, not 50 percent, not 70, not 80 percent. If you can rule out other elements

you can call someone died of natural diseases; otherwise you would not call someone died of natural diseases; it has to be exclusively natural.

Check fourth edition of Spitz & Fisher's book, page 436.

Q. In those cases where you certified an individual as having died of hypertensive cardiovascular disease, what were your findings based on?

A. I have to base on there is no other? sets of conditions. No trauma, no cocaine intoxication, no drug intoxication, no other overriding diseases. It's a medical decision based on the actual autopsy toxicology examination. It's not something you pull out from your rear back-pocket diagnosis. It only works if you rule on other sets of information; if you rule on other non- natural condition which could contribute to their death.

If you attribute someone died of hypertension, which by definition is natural disease, therefore, you have to make sure

there is no other conditions. Therefore, the question really I am dealing with is whether someone actually died of heart disease or just simply died with hypertension.

Q. So you're saying that if you ruled out all other causes of death, that's how you determine someone died of hypertension cardiovascular disease?

A. Rule out all of the non-natural causes of death. If someone died of hypertension, by definition it's a natural disease. Before you assign someone died of natural disease, you have to make sure of no other overriding conditions.

Q. Is there anything else you look to? to determine whether or not someone died of hypertensive cardiovascular disease?

A. Sure.

We do a common thing called a microscopic examination. Instead of at day one of the autopsy look at heart, weigh it, measure it based on your naked eye, we examine the tissue enlarged by several hundred fold, just like Dr. Hammers did in this case.

Microscopic section of the heart would be examined, to see any evidence of old lesion of the heart. Also, it will give you a better sense of how severe the hypertension is. Measured, the weight itself, it's useful, but can be misleading.

Q. Other than a microscopic examination of the heart and the weight of the heart, is there any other aspect of the body you would examine to determine whether or not someone died of hypertensive cardiovascular disease?

A. We mainly look for three of the end organs: Heart, brain, kidney. Is there any significant diseases, any previous heart attack, any previous changes can be attributed to hypertensive or not. Also, the age of the patient. Make sure no injury, no intoxication, that's -- it's supposed to be an absolutely natural component before you assign that someone died of hypertension.

Also, ideally, you would expect if someone has severe hypertension instead of slight hypertension, just like in this case, page number 6 showed microscopically. Heart

muscle actually shows slight, S L I G H T, myocardial hypertrophy. It says: No evidence of old infraction or a lack of blood supply.

Q. Again, I just want to reiterate. Please just answer the question. We are not looking at Mr. Grant's autopsy specifically. I am just trying to ask you, in your experience as a medical examiner, the particular findings in an autopsy that might lead you to conclude someone died of hypertensive cardiovascular disease. That's it.

Other than the ones you have mentioned, are there any other --

A. I think I really answered the question previously. Let me just simply recap.

If you try to assign someone died of hypertensive, a natural disease, you first have to rule out the unnatural aspect. Specifically, nothing trauma, nothing significant intoxication.

Second, dealing with hypertension, make sure no other disease can cause the

patient to die.

Third, you want to know how long the hypertensive is. Is there any actual significant and organ damage? You cannot really, based on the examination of the heart brain and kidney grossly, you need to look under the microscope. In this case it was done.

Q. Thickening of the walls of the heart, is that someone who could have died of hypertensive cardiovascular disease?

A. Thickening of the wall can be due to hypertension or sets of other natural diseases or drug intoxication or other sets of conditions. Thickening of the wall just means you potentially, among others, could have hypertension. With the hypertension does not mean died of hypertension, you can simply die with hypertension.

Q. I am going to mispronounce this one, but "arterial nephrosclerosis," are you familiar with that term?

A. Yes.

Q. What is that?

A. It's small vessel changes in your kidney. It can, due to hypertension, can cause small-vessel changes in your kidney and eventually cause your kidneys to dysfunction.

People who have hypertension can eventually develop a kidney failure and kidney dysfunction, just like eventually, long enough with hypertension, you can develop heart failure, also not relevant in this case. You do not have heart failure, you do not have kidney failure.

Q. What is "myocyte hypertrophy," are you familiar with that term?

A. It means that the heart is made of heart muscle. Heart muscle, medical term called a myocyte. Here we have a slight not moderate, certainly not significant or moderate hypotrophy. Slight hypotrophy, slight increase of the size, which information you can only derive under a microscopic examination. There's no evidence of ischemia or a heart attack.

Q. Is mild or slight hypertrophy an indication that an individual could have

hypertensive cardiovascular disease?

A. It depends on the degree. It depends on there's no other conditions can cause myocardia hypertrophy. Then we can say someone potentially has hypertension. Still the question: Did he die with the hypertension or died of hypertension.

Q. Looking at second page of the autopsy report, see Roman Numeral V, do you disagree with the medical examiner's conclusion that Mr. Grant has hypertensive cardiovascular disease?

A. I agree with Dr. Hammers' diagnosis.

Q. Do you agree with that Mr. Grant evidenced Cardiac hypertrophy?

A. Slight hypertrophy. That is not on page number 2, it's actually on page number 8.

Q. My question is just: Do you disagree with Ms. Hammers' findings that Mr. Grant's body demonstrated cardiac hypertrophy?

MR. LAUFER: Objection. I think he answered the question, counsel.

You can answer it again, Doctor.

A. I am in complete agreement, but I

Dr. Hua

would add one more thing to be more precise, it's slight, S L I G H T, of his heart, myocyte hypertrophy, not moderate not severe, not of his old heart attack.

Q. Do you disagree, again, looking at page 2, do you disagree with Ms. Hammers' conclusion that Mr. Grant's body demonstrated concentric left ventricular hypertrophy?

A. Certainly I'm in agreement there is nothing I would disagree with.

Q. Do you disagree with Ms. Hammers' conclusion that Mr. Grant's body demonstrated moderate arterial lobes nephrosclerosis?

A. I would take her word. There is nothing to disagree about.

I also agree Dr. Hammers' diagnosis, he did not die of hypertension.

MR. LAUFER: Doctor, just wait for counsel to ask a question. I appreciate that answer, but nonetheless, let's just wait for counsel to ask.

Q. Dr. Hua, do you agree with Ms. Hammers' conclusions on the cause of death in Mr. Grant's case?

A. I disagree.

Q. Do you know whether CPU was conducted on Mr. Grant before he died?

A. Yes, in the jail as well as subsequently in the hospital.

Q. Was he intubated in both locations?

A. I note, my recollection is he was intubated, yes.

Q. What does it mean when an individual is intubated?

A. When you're not breathing, just like in Mr. Grant's case, you lack of oxygen. One way to revive you or at least attempt one way to revive you is to make sure you can receive oxygen. Since you are not breathing by yourself, that's medically we stick a tube in your airway to help you breath, to pump the oxygen in to make sure that you can receive oxygen, sometimes successfully, lots of times unsuccessfully.

Q. What is the diameter of that tube?

A. I do not recall exactly. It really depends on -- I do not have the photograph in front of me. I do not know exactly which kind

of tube people used in this case. It's roughly around one centimeter, slightly above one centimeter in diameter. It can be hard plastic, it can be soft plastic. It really depends on whatever you have at the time.

Q. Do you know whether hard plastic or soft plastic was used here?

A. I do not know specifically. My presumption was, most adult populations would use hard plastic.

Q. In your practice as a medical examiner, have you examined individuals who were intubated before they died?

A. Multiple times. Most people will have a certain degree of resuscitation one way or another. The first step is always the airway intubation.

Q. And can intubation cause hemorrhages, trauma, or other injuries to the body?

A. It could. The real question is how much trauma? Yes, it could. To what degree of trauma, that's the actual content of this case.

Q. What types of injuries could

intubation cause?

A. If you are done properly, you will not cause much injury. If you are done improperly, you will cause lots of damage. You can cause perforation. There are lots of things that you can talk about here.

Q. When you say "perforation," perforation of what?

A. The tube can be perforated to different area. Instead of airway it can go to a different area of the organ and cause major blood-vessel damage. It really depends on -- if it's done by EMS or professional people who have enough training or not.

Q. What other injuries can intubation cause in this case?

A. Is it depends on how you treat it, proper or improperly.

Q. If done improperly what injuries can it cause?

A. Improperly you can, instead of resuscitation of the airway, you can touch a different portion, a necessary portion of the body which can cause injuries. It really

depends on where it was performed; done by professional people, people with training or not.

As I mentioned, it can cause perforation. Obviously, we do not have perforation here.

Q. Other than perforation, what types of injuries can intubation cause if not properly performed?

A. Intubation alone, you could cause tissue damage, wherever the tube is inserted into. Sometimes people insert tubes properly in the airway, can cause the mucosa in the lining of the airway damage.

Sometimes can perform inserted instead of your airway it goes to your food part, the esophagus area. It really depends on who did it, what's the experience, whoever is doing it. Even experienced people can make mistakes, but fortunately nothing significant in this case. Airway was properly placed. There is no perforation.

Q. You said that an intubation can cause tissue damage; where might that tissue damage

occur?

A. It depends on where the tube goes. If it goes to the airway, as I indicated before, it can cause the airway mucosa damage. If it goes to the wrong place, into your food pipe instead or your airway, esophagus, I mean, first you do not receive oxygen, that's a big damage. Second, it's not the purpose of the intubation.

Q. Maybe this is another way to approach it: When someone is intubated and the tube is properly put in the airway, can you walk me through all of the tissues that that tube would come into contact with?

A. You mean gently, professionally, adequately placed or roughly, inadequately performed intubation inside the airway? I am not sure what you are actually referring to here.

Q. Let's take them one at a time. If it's properly done, what tissue might the tube come in contact with?

A. It goes through all the way, from upper it goes down. It can be rubbing the

lips. Can cause gum damage. Sometimes people, from the plastic, cause the teeth damage or mucosa.

Backwards a little bit, downward a little bit, you have the stroke area, different kinds of mucosa. It really depends on the tip of the tube, where they bump into, and even if properly goes down, you can, inside the airway can cause rubbing against the side of the mucosa. The inner surface of the trachea can get damaged to a certain degree.

If you're further down, sometimes it can improperly go too deep, can cause the main bronchi damage. It really depends on each individual case, whether it's placed properly, professionally or not.

All the way down from the start, the tip of your lip all the way down where's the tip of the distal end of the endotracheal tube or worse, along its way there is a potential damage of anything along its way, yes.

Q. Does that include the trachea?

A. It should be in the trachea. You

would expect it to have some degree of damage in the inner lining inside of the trachea. If you go outside, then it's a perforation, that's a different story. I would no longer characterize it as a properly and professionally placed airway.

Q. Let's take those scenarios one at a time. If the intubation tube is properly placed, can you see hemorrhaging in the trachea?

A. Yes.

Q. If the intubation tube is improperly placed, can you see hemorrhaging in the trachea?

A. If properly placed, you would expect a certain degree, usually a moderate degree of the airway mucosa damage.

Improperly placed really depends on what improper is. If improper was not even in the airway, certainly you will not have airway damage. If you're in the airway and pushing too hard, too rough, then you would expect some damage. It also depends on how much force you're doing it. If you are knowingly

doing it or unknowingly doing it, sometimes it can be perforated.

Q. Looking on the first page of the autopsy again, the first Roman numeral, Roman Numeral Number I contains a list of blunt-force trauma. Do you see that?

A. "Blunt-force trauma, head, neck torso and extremities"?

Yes.

Q. Do you see under that, it's number E, as in Edward, it says "Contusion, right lower lip"?

A. Yes.

Q. Is that an injury that could occur with the placement of an intubation tube?

A. It's a common side effect of intubation.

Q. And F, where it says "Excoriations, oral mucosa of the lips." Is that an injury that could occur as the result of an intubation tube?

A. It's fairly common and insignificant in a way.

Q. What about G, "Neck muscle and

soft-tissue hemorrhages, multiple bilateral," are those injuries that could result from the placement of an intubation tube?

A. You can have injury to a certain degree. The question is multiple, that's troublesome, especially in conjunction with other autopsy findings listed A and all the way down.

Q. The injuries listed under G, my question is simply whether those injuries could occur as a result of the placement of an intubation tube?

A. Injury could occur. The question is the key words "multiple" and "bilateral," to what degree? I mean, no one won't consider evaluating anything in a vacuum. In the context of this case, another way to say in the context of other findings of this case, is all injury due to intubation? My answer is "no."

Q. I don't think you are quite answering my question.

MR. LAUFER: I believe he did, counsel, but you can go a bit further. That's

fine.

Q. Let me try it a different way.

In cases where you have examined a body, not this one, in cases where you have examined a body, an individual for whom CPR was performed who was intubated before their death, would you have ever observed in those cases neck muscle and soft-tissue hemorrhages?

A. Yes.

Q. And in the event that the CPR was not done well, that it was not done properly, is it possible that those hemorrhages could be multiple and bilateral?

MR. LAUFER: Objection.

You can answer.

A. Everything is possible. Just, I mean, it's possible, yes. The question is, is it probable in the context of the totality of this case?

Q. Under H it says, "Tracheal ring hemorrhage large." Is that an injury that someone could suffer as a result of intubation?

A. If done improperly, yes.

Q. Looking at I, it says, peri-carotid artery hemorrhages, bilateral," is that an injury that could occur as the result of the placement of an intubation tube?

A. Unlikely, due to intubation, going in the context of this case.

Q. What are peri-carotid artery hemorrhages?

A. Both side of the neck, right and left, away from your airway, windpipe, there is a vessel, artery called the carotid artery, and tissue nearby has hemorrhaged. In this case there was no neck line, intravascular line placed. The presence of bilateral hemorrhage, the only large answer is some force being applied on the outside of the neck caused the corresponding hemorrhage.

Q. J, looking at the same list, it says "Hemorrhage of the tongue." Is that an injury that could be caused by the placement of an intubation tube?

A. It's very commonly associated. Again, just like it can be due to the tube or due to things other than the tube, I would

Dr. Hua

never put much premium on the tongue injury alone.

Q. Looking at number, in this list, the one that says, "Petechial hemorrhages of the eyes. Periorbital soft tissue and muscle, oral mucosa, posterior oropharynx, base of tongue, trachea, esophagus and temporalis muscles."

What are petechial hemorrhages?

A. It's a small vessel rupture, caused a pinpointed brain bleeding in a corresponding area. In this case, we not only have -- in A was described "petechial." The exact word Dr. Hammers uses is called "abundant," A B U N D A N T, on the bottom of Page 4. In this case I specifically do a rough count of how many petechial hemorrhages. My counting stopped at 50. There was no point to further count. It's not like I cannot do it, it's just that I refuse to waste my time here.

MS. SIMON: We are going to take a ten-minute break. Off the record.

(Whereupon, a recess was taken.)

MS. SIMON: Let's go back on the

record.

BY MS. SIMON:

Q. Dr. Hua, you said that petechial hemorrhages are pinpoint hemorrhages caused by the ruptured vessels. Do I understand that correctly?

A. Rupture of the small vessels.

Q. And I will ask again and, again, please just answer the question: What can cause petechial hemorrhages?

A. Any reason can potentially cause the inside of the vessel, the pressure increased, put through a certain threshold will cause the petechiae.

Q. Can CPR and intubation cause petechial hemorrhages?

A. Improperly, yes. Even a properly performed can cause slight amount of petechial hemorrhage. It's not abundant or not, not in the context of this case.

Q. Can improperly done CPR and intubation cause abundant petechial hemorrhages?

A. In the context of this case, the

answer is no.

Q. Why is that?

A. Because there are other associated findings; extensive amount of hemorrhage in the neck, front and back, right and left, upper middle and lower portion of the neck, which all associated with the other finding is petechial hemorrhage, as well as big patches of hemorrhage on both sides of the eyes.

Q. That's not my question. My question is: Can improperly done CPR cause abundant petechial hemorrhages?

A. It's a misleading, yes. Yes, it can cause it, but not in the context of this case. With "abundant," it's a misleading, yes?

Q. I am not asking about another case. I am asking in general: Can CPR and intubation improperly performed cause abundant petechial hemorrhages?

A. Extremely unlikely, unless -- can you define how unprofessional the CPC was performed? If you can define that, I will probably give you a better answer.

Q. How can improperly done CPR or

intubation cause petechial hemorrhages?

A. It's not intubation. It's mainly because the chest compression can cause petechial hemorrhages to a certain degree. It's just compression and the manipulation can cause the intravascular pressure increase, can cause some vessel rupture, but not to abundant degree, especially in the context of this case.

Q. What degree of chest compression would be required to cause abundant petechial hemorrhages?

A. Only if they're done properly or not. I mean, we're dealing with petechial hemorrhage, petechial hemorrhage alone. Improperly performed over compression of chest can certainly cause petechial hemorrhage, but should not cause neck muscle hemorrhage.

I mean, no one is dealing with things in a vacuum and one piece of evidence. It's in the context of this case, that's what I am looking at.

Q. Again, I just ask that you answer the question. I am not asking about the context

of this case, I am asking you specifically what degree of chest compressions can cause abundant petechial hemorrhages?

A. If they're done professionally, it should not have abundant. There is no -- I mean the sky is the only limit of unprofessionally, improper chest compression which can cause petechial hemorrhages of various degrees, but again, look at the context of this case. Otherwise you get a misleading "yes."

Q. I am not asking about this case, I am asking in general: What degree of chest compressions can cause abundant petechial hemorrhaging?

MR. LAUFER: Objection. You can answer.

A. If they're done improperly for a longer period of time, you could cause significant amount of petechial hemorrhage. If you can define what "significant," what "abundant" is, I mean probably Dr. Hammers is the better one to define. She is the one who used the word "abundant." The way I look is

more than 50. I don't know if that's your definition of "abundant."

Q. Looking at B in this list, where it says, "Blotchy sclera hemorrhages bilateral," what does that mean?

A. It's instead of pinpointed small vessel hemorrhage, as in the background of one dot, here with a big patch just like the autopsy picture demonstrating this picture -- both sides, the large patches instead of pinpointed breathing spot.

Q. Can chest compressions or other aspects of CPR cause this sort of hemorrhage?

A. It depends on how much. It depends on how chest compressions were performed. It's potentially, yes.

Q. Looking at C, "Subcutaneous emphysema, eye lids and periorbital tissues," what does that mean?

A. It means air accumulation in the soft tissues, which is more related to the intubation. Was it done properly, over or under pressure of the outside air, that's why you have emphysema. It's the air being

accumulated inside the soft tissue.

MS. SIMON: Could you read that last answer back.

(Last answer read by the Reporter.)

Q. I am going to break that down a little bit because I am not sure I understood your answer.

So just to make sure I understand what you are saying, "subcutaneous emphysema" is air accumulation under the skin; correct?

A. Yes, that's the definition of emphysema. It's air being accumulated in somewhere, here the subcutaneous, in the soft tissue underneath the skin.

Q. And eye lids, that term fortunately I do know, but "periorbital tissues" means around the eyes; right?

A. Yes.

Q. And what can cause subcutaneous emphysema?

A. Air being trapped into the soft tissue, which either done properly or improperly way of doing it causes air being trapped in the tissue.

Q. So improper CPR can cause subcutaneous emphysema?

A. Improper can cause, just as proper can cause as well. It's a known side effect. It's a known, well-documented side effect.

Q. And is it a side effect of chest compressions of the mouth-to-mouth portion of CPR or intubation or something else?

A. It's the pressure being run too high towards the airway area and also because the airway, I mean, they probably improperly positioned the tube; the air was always running to whatever the least resistant is, not directly going to the lung, but here going to the adjacent soft tissues as well.

Q. I am just trying to understand what portion of CPR, but I think you answered it. You are saying an improperly positioned intubation tube might cause the air flow to go somewhere where it's not intended; correct?

A. Yes. Even properly performed CPR would cause airway trapping in soft tissue as well.

Q. In subcutaneous emphysema of the kind

noted here or any other kind, can it look like bruising, swelling of the skin?

A. It's the swelling of the skin, then bruising of the skin.

Q. Look at distension, this is number D on the same list, "Distention of neck veins and temporal vessels, marked," what is that?

A. Instead of the normal caliber vessel, here the vessel is very congested. There was blood to the degree of obvious, to a degree deserved to be mentioned by Dr. Jennifer Hammers on the first page of her report. It's described as a mark in the end.

Q. Where are the temporal vessels located?

A. In the temporal area, the side above your ear, in that region.

Q. And the neck veins, I assume, are on either side of the neck?

A. Yes, roughly.

Q. Don't let me -- where are they located?

A. There is neck vein on all areas of neck. Two of the bigger ones on the side and

the small branches in the front, the back, all over the place.

Q. And what can cause distension of neck veins or the temporal vessels?

A. It's inside pressure become high; therefore, it's dilated, therefore, it's called marked dilatation as defined by Dr. Jennifer Hammers.

Q. My question is, what can cause it?

A. Inside pressure becomes higher than normally expected to be.

Q. What can cause the inside pressure to become high?

A. Any compression of the neck can certainly cause, any obstruction in different area can cause, and there is a long list. The short answer is pressure inside of the vessel much higher than usual.

Q. When you say obstruction of the airway, could an intubation tube cause harm?

A. Not intubation, it's here the dilatation distention vessels. It is the inside pressure of the vessel is higher, nothing to do with the airway per se.

Q. I thought you just said obstruction of the airway can cause distension of these things?

A. I said it's compression of the neck. I am not saying -- if I said it, I was misspoken. Compression of the neck prevents blood flow, therefore, causing distension of the vessel. Here we talk about marked degree of significant degree of distension, as defined by Dr. Hammers under 1D.

Q. Take a step back again, not about this case specifically, just in general, what can cause distension of neck veins in the temporal vessels?

A. Anyone can prevent the proper flow of the blood, can cause the dilatation, significant dilatation in this case, of the vessel. Compression of back flow or overflow -- I mean, here we are dealing with the vessel. There's always one vessel pumping, the other vessel coming back.

Any elements, any condition can cause the pressure high, will cause the dilatation of the vessel. Like in this case we have

significant neck injury, which indicates there is compression of the neck, which certainly will be one of the conditions that can cause significant marked distention of the neck vessel -- neck vein.

Q. You said "any prevention of the proper flow of blood" can cause distension of the neck veins and temporal vessels; right?

A. Any condition prevented the proper back circulation of the neck vein, which is seeding back to your heart. If you prevent its flow, it will cause the dilatation of the vessel inside pressure of heart. Compression of the neck, can certainly do it.

Q. Can CPR or intubation cause a prevention of the proper flow of blood back to the heart to cause distention of the neck veins and temporal vessel?

A. Potentially, yes. The question is: To what degree?

Q. Look at K in the same list, "subscapular hemorrhage, occipital, two inches each;" what do those refer to?

A. It's in the occipital back portion of

the head area. Under the skull there is tiny hemorrhage, three of them; three of them in total, each about two inches.

Q. In your view, Number K, the subscapular hemorrhages, were they the cause of Mr. Grant's death?

A. It's the general autopsy finding. I mean, all that means is that pressure being placed on that particular area. That's why you have the bleeding in this particular area, that's all that means.

The question is, what is the context? Why you have this? I do not know. Was it contributing to anything, contributed nothing, contributed significantly or a little bit to the cause of death, I do not know. It's just simply there.

Q. L says "cerebral edema," what is that?

A. Normal brain has its own configuration. For whatever the reason, lack of oxygen is one of them, lack of blood supply is another reason, brain can become -- the first response of the brain is to become more

swollen; more fluid accumulation inside, more congested than usual. That's why, look at autopsy picture indicating the brain has moderate degree of swelling and edema, which I agree with the autopsy picture by Dr. Hammers, but I understand later on the neural pathologist just thinks everything is normal.

Q. What can cause cerebral edema?

A. Lack of oxygen, lack of proper blood circulation to your brain area. The first manifestation will be brain swelling edema. Obviously, head trauma can cause that, we are not dealing with this. I mean brain trauma itself can cause swelling edema; obviously, we are not dealing with that.

Q. Looking at M, it says: "Hemorrhage, left forearm muscle 5 inches, right elbow, half inch, left shoulder 4 inches, and right lateral chest soft tissues is 1 inch."

A. That's means the bruises hemorrhage in the different portions of the arm and leg area as the causal area being found, being documented as it is.

Q. Would any of those hemorrhages have

caused Mr. Grant's death?

A. Arm and leg area, obviously not. Chest area, depends on how it occurred. I mean, someone had to explain it, why he has so many bruises at different portions of the body.

According to witnesses there is no trauma, nothing wrong. It's more, for me, it's what Dr. Hammers sees, what Dr. Hammers documented and a further step for me is why all the other witnesses did not see any injuries at all.

Q. Dr. Hua, if someone fell from a sitting position or a standing position on to the floor, could that cause the hemorrhages of the type that are listed here under M.

A. It's unlikely based on the distribution alone. If you fall, you would expect the fall, unless you have multiple-force trauma, you would expect a fall would cause injury on one plane, right or left, front or back, and usually on the protruding portion of the body.

Q. Could chest compressions or some

other aspect of CPR lead to a one-inch hemorrhage on the chest?

A. It could, yes.

Q. I don't think you answered that.

A. I said it could. The short answer is "yes."

Q. Going back to a question I asked earlier though, is it your understanding that -- let me rephrase that.

The hemorrhages that are listed under M, could any of them have been fatal?

A. By itself, no.

Q. Looking at number N, "Deep lung parenchymal laceration, lower left lobe."

What is that referring to?

A. It's here Dr. Hammers described the lower portion of the left lung. There is a breakage of the tissue, about 1 inch. I do not see -- at least I cannot find a corresponding photograph. I don't know what that means.

Q. Is it possible that a lung could be lacerated when removing it from the body during the autopsy?

A. Most likely in this case. In the context of this case, it's the most likely scenario. I mean, it's a postmortem exam.

Q. You mentioned "according to witnesses"; what witness are you referring to?

A. There is a one-page report, the witness indicated he did not suffer any trauma, that's my understanding. Witness indicated he was smoking something which is not substantiated by subsequent toxicology, which has indicated he had no trauma, which is contradicted to subsequent autopsy finding.

Q. Where are you reading from?

A. I think it's one page.

Q. There's a Bates Number in the lower right corner, perhaps?

A. I think I do not have the Bates Number. It's the only page of the medical leader investigator, but it's a supplemental case information by the OCM on May 19th. It mentioned something, someone saw him, he was smoking something in the jail cell that smelled like a marijuana. Also, nobody indicated he was in the middle of a fight with

anyone.

Q. Just looking at the document that we have marked as --

A. Okay, I can pull that page.

Q. -- Exhibit B. I just want to make sure we're referring to the same page.

A. All right.

Q. What's Bates stamped US_03606. I just want to make sure that you have that page.

A. At 3608, mentions some witness saw him smoking something in the jail cell that smelled like marijuana.

Q. 03608?

A. 36608, US_03608.

Q. Other than the information on that page, did you review any witness statements or interview notes?

A. I was not provided other information. What I received, what I reviewed will be listed on the first page of my report, second paragraph. I did find a mistake of my report, second paragraph: Total autopsy photo I reviewed is 332 not 338. I just added up

together, should be 332 photos, autopsy photos, not 338.

Q. Turning to your report then, I think you said, looking at Paragraph 2, I think you said but just to confirm, that's a complete list of the records you reviewed in creating this report?

A. In my report of March 11 of 2020, yes. The only additional item I received is the Dr. Jim Gill report, I think sometime early this year.

Q. Did you review medical records from New York City Presbyterian Hospital?

A. I was not provided, so therefore I did not review.

Q. Did you review FBI form 302 interview notes?

A. No, I did not receive it.

Q. Did you review any notes from interviews with the staff at the Bureau of Prisons?

A. I was not provided any of this.

Q. In drafting a report, did you take any notes?

A. I usually do everything on the iPad, I do not generally take paper notes.

Q. Do you have notes on your iPad?

A. Highlighted, just like that, marker highlighted for my review, yes.

Q. Other than highlighting of the documents that you've mentioned, are there any other notes that you have taken in connection with this case?

A. In review of last night and today, I generated a one page, I guess one-page notes, cheat sheet I call it, specific picture, fourth edition, Page 436.

MS. SIMON: We will call for production of the notes.

MR. LAUFER: If you will just give me a copy of that, Doctor.

THE WITNESS: Sure.

MR. LAUFER: Thank you.

Q. Looking at paragraph 5, second sentence says: "3 postmortem toxicology reports, two at OCME and one at MMS, revealed no acute intoxication by drug prescription medication or alcohol."

Dr. Hua

Do you know whether the toxicology tests conducted on Mr. Grant included all possible synthetic chemtinoids?

A. All synthetic chemtinoids which we have a test for.

Q. Are there synthetic chemtinoids for which we do not have a test?

MR. LAUFER: Objection, but you can answer.

A. Yes.

Q. In 2015 were there synthetic chemtinoids for which we did not have a test?

A. Obviously, yes.

Q. I just want to make sure I have the final version of the report. In my version it's missing paragraphs --

A. I noticed that. I just noticed that. I am missing a 6.

Q. That's fine. I just want to make sure I didn't have a draft.

Looking at number 7. You say, "Per autopsy photographs, Roberto had autopsy evidence of neck compression."

What particular photographs are you

relying on to make that conclusion?

A. Multiple photographs showing front, back and neck, right and left side neck, there is soft-tissue hemorrhage, both superficial as well as deep in the upper portion, mid portion, as well as lower portion of the neck. All documented in Dr. Hammers' report.

Q. I am asking you to identify the specific -- you said you relied on --

A. Do you want me to read the report? I can do that also.

Q. You indicated you relied on photographs, not just the report. I am asking if you relied on photographs, if you could identify which photographs?

A. Photographs in conjunction with the autopsy report.

Q. My question is which photographs?

A. I was not at the time of the autopsy. I depend on whichever the records, Dr. Hammers generated; properly or improperly, that's a different issue. That's why you do not analyze a case intentionally in the vacuum, pick and choose, it's called misleading. Yes,

if that's what you want, that's what you get.

Q. Dr. Hua I am asking, number 7 says "per autopsy photographs." I am just asking which photographs?

A. Per autopsy photographs, Roberto has autopsy -- okay, that's good. All I have to answer is I have received a total of 332 photographs on two CD's specifically. The only reason I noticed mistake of 332 instead of 338, is because when I received Dr. Jim Gill's report, he received a total of 15.

I am reading Dr. Jim Gill's report, page 1, under number 2, OCM autopsy imaging, 51; radiograph 12. I did not receive radiograph.

His conclusion is based on 51 autopsy imaging -- actually, autopsy imaging I received was 332, which is significantly more than he had. Obviously, he received 12 radiograph x-ray imaging which I do not have.

If you want a report, I can point a number to you, if that is what you want.

Q. My question is just in number 7 you indicate "per autopsy photographs," and I

would like to know which specific autopsy photographs you are referring to?

A. When we physicians say "autopsy photographs," it is two layers of meaning: First, what is positive finding, what the injury is; second, what is not positive finding, which no injury is.

In this case, the neck pictures started from imaging 119 all the way down to 152. It says different layers of neck muscle. It's mainly from the front, different layer of front, right and left.

In addition, that's the first CD, the second CD -- the first CD contained a total of 166 imaging. The second CD contained another additional 166 imaging, starting from imaging 177 all the way down to 233.

In addition, the imaging from 289 further down to 296, that's regarding the neck soft-tissue injury, which is obviously significantly more than Dr. Gill has access to, a total image of 51. We are talking 330 images here.

MS. SIMON: You got cut off for a

second.

Monique, could you just read back his last few sentences.

(Last two paragraphs of previous answer was read by the Reporter.)

Q. The injuries you described in number 7, are those the same injuries that are described in the autopsy report?

A. Okay. We are just dealing with the first sentence of number 7, the neck compression related injuries.

The second part is more related to the petechial.

(Off the record to correct technical issue.)

MS. SIMON: I'm back.

A. The pictures, the number, index number I gave you, is only dealing with the first sentence of paragraph number 7. The second paragraph is more specific information. It reads as: "Specifically, Roberto has multiple, significant and recent injury to his neck soft tissues as well as multiple and significant eye petechial hemorrhage."

Dr. Hua

If you want to point out an eye petechial hemorrhage, I would be more than happy to do it, but it's obviously in the 332 photographs that I received that reflect that and also documented by Dr. Hammers' autopsy report as well, which she characterized as "abundant," I think on Page 2 or Page 4 of her report -- Page 4 of her report.

Q. Let me be clear. My question is: The injuries that you described in Paragraph 7, I am referring to all of the injuries that you have identified in Paragraph 7, are those also included in Dr. Hammers' report or are there injuries that you have identified in paragraph 7 that are not in the autopsy report?

A. All injuries I have summarized in paragraph 7, it's in the autopsy photograph as well as Dr. Hammers' report.

Just to be clear, you initially asked me to describe the index, the pictures of corresponding neck injuries, that's the picture index figures I gave you. In addition, the second sentence of paragraph

Dr. Hua

number 7 indicated the multiple and significant eye petechiae and hemorrhage, both being reflected in Dr. Hammers' report, as well as the 330-plus photographs that I received. If you want that to be pointed out, I will be more than happy to do that as well, just like the neck soft tissues.

I understand lots of pictures Dr. Gill did not have.

Q. Just for the record, you are basing your views on the number of images Dr. Gill has in his report; correct?

A. Yes. His total of 51.

Q. Are you basing it on any other information?

A. No, based on total number of --

Q. Okay, thank you. That's all.

Looking at Paragraph 7 still, you say there was autopsy evidence of neck compression. Can you point to me where in the autopsy report you concluded there was evidence of neck compression?

A. Neck compression means neck muscle injury. Autopsy report indicated neck muscle

injury, starting from Page 5, mid section of Page 5, the first sentence is: "The neck is with evidence of hemorrhage as follows," all the way back to page number 6, the end of the first paragraph, ended with: "There is a discrete 1" x 1/2" hemorrhage at the medial aspect of the right semispinalis cervicis muscle." That's in the back of the muscle.

In addition, just like the second sentence of my paragraph number 7, which described the petechial hemorrhage in this case, in Dr. Hammer's report it was documented in last paragraph of page number 4, starting with "eye lids" and periorbital area, that paragraph, all the way down to the end of the first paragraph on page number 5 and ending with: "Smaller blotchy hemorrhages in medial aspect of the eyes."

Q. Is it accurate to say there are sort of two main categories of evidence that you view as evidence of neck, which are, number one, the hemorrhages that are described in the neck and, number 2, the petechial?

A. In the context of this case, yes.

Dr. Hua

Q. Starting with the first one, the evidence of the hemorrhages?

A. It's also included on the summary page, autopsy page, Page 1 of Dr. Hammers' report as well -- as well as subsequent microscopic report between pages 7 and 8. All of the hemorrhage area was microscopically analyzed; turns out to be a recent injury not old injury damage in this particular area.

Q. If someone has a hemorrhage to some of the neck muscles or the tissue, is it possible to tell in all circumstances whether that was an internal cause or an external cause? In other words, how do you know whether there was compression or some pressure or something inside, such as from an intubation tube?

A. Hemorrhage alone just tells us it's a damage of the small vessels in the adjacent area. That's why you have a hemorrhage. Hemorrhage is not supposed on site of the novel tissue. Shouldn't have blood supply maintained within the blood pressure. If, for one reason or another, blood vessel gets

damaged, that's why you see the bleeding, that's what normal people can associate with.

In the context of this case, Roberto has extensive amount of petechiae, as well as blotches of hemorrhages, which were most consistent with neck compression, the same as anything else. Certainly not due to hypertension.

Q. In the absence of the petechiae, from the hemorrhages alone, would it be possible to tell whether it was an internal force, such as am intubation tube, or a neck compression?

A. If you are looking at the evidence, the isolation in a vacuum, it's a reasonable statement, except for the extent, the degree of hemorrhage in this case, with the understanding this recitation was by hospital staff. I presume they are not pure armatures. They should know what they are doing.

Q. Is it your understanding that the CPR was only performed by hospital staff?

A. No. CPR was initially performed in the jail. Subsequently, EMS takes over, followed by hospital resuscitation.

Dr. Hua

Q. If you turn to the CPR that was performed by individuals who were not hospital staff, would that change your opinion in this case?

A. In the context of this case, autopsy finding, the answer is no.

Q. If you learned that the CPR was performed by correction officers, would that change your opinions in this case?

A. In the context of this case with extensive mild petechial hemorrhage, to that degrees. It's not what you have, it's to what degree you have, how much you actually have. You have the front of the neck, back of the neck, right side neck, left side neck, superficially of the neck, all the way to the deep neck muscle right next to your neck backbone area. That would be inconsistent, or another way to put it, highly unlikely, extremely unlikely, due to resuscitation alone.

Q. The hemorrhages to the neck, I think you have answered this question and I apologize for it if I am asking you to cover

old ground.

If I understand you correctly, you are saying that the reason you concluded that Mr. Grant suffered from neck compression is the extent of the hemorrhages in the neck area, accompanied by the petechiae and other hemorrhages; correct?

A. Significant neck muscle, neck soft-tissue injury; significant petechiae in the eyes. Again, the bottom line, it's in the context of this case. When I say the context of this case, certainly include there is no evidence of acute intoxication. There is no evidence of fatal, significant, natural diseases; therefore, what Roberto died of?

Autopsy is always examining the whole body at the end of the day. Put all the evidence on the table, what did he die of? What he died of? That's my question. That's my answer.

Q. What I am trying to understand is with the neck hemorrhages, I think -- well, I think I understand what you're saying, but I just want to make one thing clear.

Dr. Hua

So with the hemorrhages in the neck, standing alone it's not possible to say whether it was an internal force from an intubation tube or an external force; correct? In other words, there is nothing in the nature -- please let me finish -- there is nothing in the nature of the hemorrhages itself, standing alone, that would allow you to conclude it was external compression; correct?

MR. LAUFER: Objection.

You can answer.

A. No. No. Hemorrhage alone could, due to intubation, could, due to resuscitation. In this case it's the amount of hemorrhage in the neck, in different portions of the neck, front and back, superficial deep right and left, as well as significant abundant, with the term Dr. Hammers used, over 50 and stop counting would be typical of what use, plus there is no other competing cause of death in this case.

There is no active intoxication. There is a question whether he was intoxicated or not, but at the end of the day if you do

not find something, it means you do not find something. You can suspect all day long, as actually was suggested in my report suggesting the same tissue should be retested, it's at paragraph number 12. It should be at least retested as it advances and more stuff can be picked up.

Why retest in this case? The third test of Fentanyl was obvious that it occurred after the completion of Dr. Hammers' report. Dr. Hammers' report was finished on December 28th and that particular Fentanyl test, the third OCM -- the second OCM toxicology test was tested six or seven months later, after the completion of the report. In a way, sir, I am looking for an addendum of this report. Additional tests were performed, but not really included or incorporated into her report.

Q. What test do you think should have been incorporated into her report?

A. The second toxicology report looking for Fentanyl, which was performed and report was finished on September 13th, 2017. Dr.

Hammers' report was completed on, after sign-off, December 28th. That's roughly like nine months later. There was additional report requested, but not really incorporated into Dr. Hammers' report.

I mean, I certainly expect addendum, supplement report, to reflect the extensive exhaustion of testing and nothing being found.

Q. There is still one thing I am trying to understand; I am trying to ask it in a very straight forward way and move on, but I think I may not be asking the question clearly.

Let's do it this way: What I am trying to understand is, not this case, just under normal circumstances in an autopsy, setting aside the context of this case, setting aside the particulars of this case, my question is this: From a neck hemorrhage alone, is it possible to tell always whether it's external force from a compression or internal force from an intubation or do you need additional information to make that determination?

A. You always, first, the simple answer,

you always need additional information. When you say "neck injury alone," a little bit neck injury would be certainly fully expected in the normal course of CPR. If it's significant at a different point of the neck from the back, superficial or deep, would make a it unlikely. In the context, autopsy is looking at autopsy toxicology injury, everything together. Put all of the pieces together to get what actually happened.

No one tried to intentionally isolate, hide it in a vacuum looking at the limited amount of what is supposed to be. That's misleading.

Q. I don't think you understand my question. I am trying to understand the mechanics of what you are explaining.

As a mechanical matter, if you see a neck hemorrhage of neck tissue, I am trying to understand whether from that alone you can tell whether there was external force or internal pressure or do you need to look to something else to determine the cause of that hemorrhage?

A. Always look at other information. Neck injury alone makes it impossible. Significant neck hemorrhages make it unlikely, not probable. If there are other findings, lack of other competing causes of death or further strengths is building up the case.

Q. Do you know whether CPR was done properly or improperly in this case?

A. I would not be in a position to judge. I was not there.

Q. Could improperly performed CPR cause the type of neck hemorrhages we see in this case?

A. Not to that degree. Not in the context of this case. It's always look in the context of the totality of this case -- what you have, what you do not have. People can intentionally mislead. To look at this alone, that's not the way I deal with things. That's not the way most forensic pathologists are supposed to deal with things.

Q. If CPR were improperly performed here by amateurs, could it have caused the hemorrhages in the neck as described?

A. It can cause hemorrhage to a certain degree, but not to the significant degree as in this case, especially in the context of this case, significant petechial hemorrhage would be unlikely to have a proper explanation of CPR and CPR alone. And another layer question, why he needed CPR to start with?

There are some people sitting here, I do not see CPR, unless you have a catastrophic situation going on do you need CPR is there any intoxication? Not in this case. Is there any fatal, immediate fatal natural diseases? Not according to Dr. Hammers' report.

You have to have a reason to need CPR to start with. There you have a secondary complication side effect of CPR-related injury. Why he needs CPR?

Q. You mentioned you need to look at the context to determine a cause of death; what do you mean by "context"?

A. Seeing laceration, witness statement, gross autopsy, microscopic examination, toxicology, x-ray examinations, see whether there is a fit or unfit. At the end of the

Dr. Hua

day, my job is simple, just whatever is on the table, did he die of this or die with this?

Q. Look at paragraph 8 of your report. Looking at the last sentence, you refer to "neck compression marks, manifested as soft-tissue hemorrhages were on the surfaces of the bilateral hyoid bone."

Did you draw that conclusion from something in Dr. Hammers' report or from the photograph?

A. I think from Dr. Hammers' report, that's my recollection. I mean, can be due to the provided autopsy pictures as well. I am pretty sure if he incurred what I would expect, to take a picture of the hyoid bone as well.

Q. Looking at Page 5 of the autopsy report, about three-quarters the way down it says: "There is discrete 1/8 inch hemorrhage over in the posterior oropharynx adjacent to the cornua of the hyoid bone bilaterally. The hyoid bone is reviewed without anthropology at autopsy and is without trauma"?

A. I do not see which paragraph.

Dr. Hua

Yes. The hyoid bone itself said no fracture, which was subsequently evaluated by anthropologist. I do not have the report. I presume it's a very small consultation.

Yes, it says: Discrete 1/8 inch hemorrhage over the" -- yes, okay -- of the cornua, which is side of the hyoid bone biologically.

Q. My question is: Your report says there are some same-neck compression marks were on the surfaces of the bilateral hyoid bone, but Dr. Hammers says that the hyoid bone was without trauma.

Are those inconsistent?

A. Okay. Okay.

"Cornua," it's a Latin term for "corner." Corner of the hyoid bone biologically. That's a hemorrhage of this area. It is the hyoid bone itself, so no fracture. On the corner of the hyoid bone is a soft-tissue hemorrhage which did not cause the actual fracture of the hyoid bone. There's soft tissue on the surface as compared to the bone fracture itself. The first answer

Dr. Hua

is "yes"; the second cause of fracture is "no."

That's why I think I started with there was no neck bone fracture there. That's what I indicated.

Q. I just want to understand, make sure I understand your statement there.

Go ahead, Dr. Hua.

A. I think the last sentence, "Same neck compression lock (manifested by soft-tissue hemorrhage which on the corner of the hyoid bone or on the surface") -- again, "on the surface of the bone," but not in the bone itself.

Q. What I am trying to understand is in your report are you're describing hemorrhages to the tissue that's next to the hyoid bone or are you describing --

A. Soft tissue. Soft tissue as indicated exactly one line up, "manifested as soft-tissue hemorrhage." It's soft-tissue hemorrhage, whether it was pure soft-tissue hemorrhage.

Q. Let me ask the question entirely if

you don't mind?

A. Go ahead.

Q. What I am trying to understand is in that sentence we have been discussing in your report, are you describing hemorrhages to the soft tissue that is next to the hyoid bone or are you describing some damage to the hyoid bone itself?

A. (Manifested as soft tissue). Hyoid bone is a bone, not soft tissue. That will be self-evident in terms of the answer to your question.

Q. Let me ask this: Were there any compression marks on the hyoid bone itself?

A. Soft tissue immediately at both sides of the corner side of the hyoid bone has compression marks, but there is a bone itself that says no fracture, whether because of young age to not cause fracture or other reasons not strong enough to cause fracture, that's debatable. The bottom line says no bone fracture, but there was soft tissue on the surface of the Hyoid bone because there is pressure here.

Dr. Hua

MS. SIMON: Monique, could you read my question back?

(Last question read by the Reporter.)

A. Yes, soft-tissue hemorrhage on the surface of the hyoid bone.

Q. That's not what I am asking. I am asking you whether there were compression marks on the hyoid bone itself? It's a "yes" or "no" question.

A. I might not be able to say either way because either the answer -- with a hyoid-bone fracture you can see the fracture. If the hyoid bone is not fractured, all I can say is not enough pressure to cause the fracture. We do not know. This is obviously force was directed on the soft tissue of the hyoid bone but not on the bone itself.

Q. I understand that there was no fracture of the hyoid bone, but you used this term "compression marks," and I would just like to understand separate from the --

A. Compression on the soft tissue adjacent to the hyoid bone, but not cause the fracture of the bone.

Dr. Hua

Q. Please let me finish my question.

I understand that there is no fracture on the hyoid bone. I understand that there is compression, as you have stated, to the soft tissue next to the hyoid bone. My question is: Are there compression marks specifically on the hyoid bone itself?

A. Impossible to answer. It's the pressure to reach the damage to the soft tissue on the surface of hyoid bone, but did not cause a fracture of the bone itself. I cannot rule it in, neither can I rule it out, the compression marks on the hyoid bone.

Q. I just want to understand. You can neither rule in nor rule out compression marks on the hyoid bone?

A. Compression mark on hyoid bone to cause a fracture, it did not happen.

MR. LAUFER: You get what he is saying, counsel, right? It's compression on the soft tissue that's covering the hyoid bone.

THE WITNESS: Yes.

Q. The soft tissue that's adjacent to

the hyoid bone, is it attached to the hyoid bone or is it separate?

A. Yes, attached to the hyoid bone.

Q. And does that particular soft tissue that you're talking about in disseminating your report, that's next to the hyoid bone, does it have a particular name?

A. No. It's soft tissue at the corner of the hyoid bone.

Q. Okay.

In your review of the photographs and in your review of the report, did you see any indication that the hyoid bone itself, not the soft tissue but that the hyoid bone itself was damaged?

A. No. No, in terms of no fracture.

Q. Was there any other evidence of damage beyond a fracture?

A. No. No visible damage to the bone itself.

Q. Looking at number 13, you say, "In the Absence of Grant's fatal and acute intoxication or fatal natural disease, Roberto's cause of death should be listed as

inflicted and/or homicidal neck compression."

Do you see that sentence?

A. Yes.

Q. When you say "inflicted neck compression," what are you referring to?

A. Not by himself.

Q. When you say "homicidal neck compression" what are you referring to?

A. For medical examiner "homicidal" means due to the action of someone else, not self, which is entirely different from the legal meaning of homicidal.

Q. Understood.

When you're using the words "inflicted" and/or "homicidal," does "inflicted" mean something different than "homicidal"?

A. No, the same. For me, it's the same. It means not self-inflicted.

Q. Understood.

When you say "neck compression," are you referring to strangulation or something else?

A. I mean, there is different location

of the neck, front, back, right, left, superficial, deep to soft-tissue hemorrhage, its indication to me is the blood-vessel damage in conjunction with the actual other finding, petechial hemorrhage to a significant degree, abundant, according to Dr. Hammers more than 50, as my lazy counting, would be inflicted injury.

MS. SIMON: Monique, could you just read my question back.

(Last question read by the Reporter.)

Q. I am trying to understand, when you say "neck compression," are you referring to strangulation?

A. No, that's why I said neck compression. "Strangulation," there are two kinds of strangulation, either manual strangulation, humanly or ligature strangulation.

Do I have enough for me to conclude? No. All I can say is multiple neck muscle injury, front, back, right, left, superficial, deep, indications that damage of the neck muscles at various areas in conjunction with

the significant amount, not just purely I see a couple of petechial. It's the word of "abundant" as used by Dr. Hammers and my lazy counting of more than 50 in the context of this case and the absence of intoxication, in the absence of fatal significant natural diseases. Therefore, I concluded it's due to inflicted injury or homicidal injury. Personally I use these two word interchangeably.

Q. I am asking now whether when you say "neck compression" you are referring to strangulation, whether manual, ligature or something else?

A. I do not use a single word of strangulation in my two-page report. The evidence I have is neck compression. I do not have additional evidence to specify further.

Q. Other than strangulation, what could neck compression indicate?

A. It's neck compression. It means soft-tissue damage in the different portions of the neck. I never used the word "strangulation." You repeatedly used the word

"strangulation" that I intentionally did not use.

Q. I understand that.

What I am trying to understand is what you mean by "neck compression"?

A. Then don't put the words in my mouth.

Q. My question is: When you say "neck compression," is strangulation one type of neck compression?

A. Strangulation is one type of neck compression. If you have proper investigated, proper investigation, detailed investigation, you can be more specified. Here I do not have it.

Q. Other than strangulation, what other types of injuries, what other incidences are covered in the term "neck compression"?

A. "Neck compression" means neck has blood-vessel damage in different areas, multiple areas in conjunction with petechial finding, significantly amount. I did not use the word "strangulation" for a simple reason, I am hoping more investigation could be conducted -- or at least I do not have it for

me to review.

Q. So I am clear, you don't know whether manual or ligature strangulation occurred here?

A. I did not use either word here, manual strangulation or ligature strangulation in my report. I just hope someone can answer the question why he had extensive neck injury at different portions of the neck in association with significant amount of petechiae and patches of hemorrhage.

Q. I am asking a "yes" or "no" question. My question is: You don't know whether manual or ligature strangulation happened here; correct?

A. I did not see evidence of ligature mark in this case. That would be a superficial answer or I do not have evidence of ligature strangulation, that's obvious, but what actually happens, I do not have enough evidence for me to conclude judicially, cautiously.

Q. Do you know whether manual strangulation happened here?

A. I do not have enough evidence for me to conclude that. There is neck compression. Some people would choose using a word called mechanical asphyxia, which would be equivalent to neck compression. More investigation is needed, that's all I am saying.

Q. Were there any external injuries to Mr. Grant's neck?

A. I am sorry, can you repeat?

Q. Were there any external injuries to Mr. Grant's neck?

A. I do not think so. I mean, he is dark skinned, yes, but nobody noticed anything. Not found on picture, not according to Dr. Hammers. She has the advantage of directly looking at the body.

Q. If someone dies of neck compression, how does that occur?

A. First, being added on caused the muscle damage, soft-tissue damage, caused the breakage of the vessel. Therefore, we have the bleeding. Here we have extensive bleeding associated with extensive petechiae, as well as patches of hemorrhage.

Q. If sufficient force is applied to the neck to cause an individual's death, does that death happen immediately or could it happen sometime later?

A. It could happen immediately, just like it could happen at some time delay.

Q. What would cause a delay in that death?

A. It's the asphyxia causing the loss of blood supply or oxygen supply to the brain. That's where brain becomes swelling, that's why people die.

Q. If sufficient force is applied to someone's neck to cause their death but it doesn't cause an immediate death, walk me through how that death would occur?

A. Force on the neck can, if you limit amount of force compressing your vein, significant blunt force can compress your artery, more forces can compress your airways, the end result is hypoxia, lack of oxygen and lack of blood supply to your brain -- therefore you people die. I mean like people drowning, people committing suicide, it's the

lack of blood supply to your brain.

The human body was built in such a way, if you compress a short second, you lose consciousness. You compress not enough, more than 4 to 6 minutes, you're going to die on that, die on you because your brain has lack of oxygen. Brain has ultimate control of everything downstairs, your heart, your breathing.

Q. Once there is a lack of oxygen to the brain, the individual will die immediately; correct?

A. I mean, it really depends on how you mean by "immediately." People with lack of oxygen --

Q. I understand. Fair enough.

You said a short compression can lead to unconsciousness and after about 4 to 6 minutes, a person would die; correct?

A. If for a healthy person, the normal number is somewhere around five minutes; people would have irreversible brain damage if you use the nowadays definition of the death, as defined by a human being, by a brain, then

you are dead. You become organ donor.

Q. If sufficient force is applied to someone's neck to cause their death, are there circumstances where were there to be a delay between the time in which the neck compression was applied and the time they died?

A. I would not be knowing. It depends on reliability of the witness statement, if you had witness. If you do not have a witness, you are not in that position to argue.

Q. I have questions about this particular case in a moment, but right now I am actually just trying to understand from you what it means to die of neck compression. How that actually happens.

I understand what you're saying is if sufficient force is applied, first the person will go unconscious; then the person will die four to six minutes later under normal circumstances; correct.

A. It's the compression to what degree, to what duration, that makes a difference. I mean, gentle compressed neck, I am not going

to die, obviously not, because it's we're not even causing neck soft-tissue damage.

Q. My question is: Let's assume, as I said, sufficient force is applied to the neck to cause death; okay?

A. Sufficient force.

Q. Let me ask it this way: If someone's neck is compressed but it does not cause death, let's say it causes even unconsciousness, but it does not cause death and the person then has lucid intervals and is walking and talking and moving around, is it possible that the earlier neck compression could subsequently cause death or is that not something that would happen?

A. I mean, the answer is no specific answer. That's just a simple answer like this. Because what you define as neck compression significant amount, obviously the important word was "compressed the side neck" was significant, because that's where the major blood vessel; is.

Compression the back and neck, it's less relevant. It really depends where the

compression or significant force was applied at for how long. Each individual person will be different. If it's a perfect 18 years old, healthy guy, as compared to someone who has mild hypertension, it's all different. I mean, I do not want to make it complicated, but it is.

Q. What I am trying to understand is if sufficient force is applied to the neck for the individual to become unconscious, let's say, but they regain consciousness, have a lucid interval where they are talking and walking, are there circumstances under which the individual could later die of the neck compression or at that point have they survived that event?

A. If you're dealing with a perfect tip-top shaped body, no other preexisting conditions, most likely the answer would be unlikely to be fatal and unlikely to result in death.

If someone has a preexisting condition, you're looking at an entirely different chapter of the book, but as a

forensic pathologist, we're dealing with injury and disease or a combination of both.

As I indicated early, natural diseases are exclusively natural, a combination of both. You die of non-natural diseases.

Q. I want to make sure that I understand -- so under the hypothetical I described, where an individual is suffering neck compression but does not die at that time, you're saying it's possible that they might later die after a lucid interval if they have certain preexisting conditions?

A. That's not what I said. I said even if you were in tip-top condition, no preexisting condition, when I say natural diseases, intoxication, among others, the chance of death, it's unlikely.

If someone has a preexisting condition, like a little bit hypertension here or there, which is a much more viable candidate to die, it's an entirely different thing.

Q. So, in your view, it's possible that

someone could suffer non-fatal neck compression, have a lucid interval, and then subsequently die as a result of the neck compression if they have certain preexisting conditions.

MR. LAUFER: Objection. You can answer.

A. You specifically mentioned there were lucid intervals. I mean, lucid intervals can only be documented by a substantial reliable witness. I mean, a reliable witness and that's the first hurdle you have to go through.

Obviously, here, the witness, reliable, quote/unquote "reliable witness" indicates there's no fact. Second, reliable witness indicated smoking something. We did not find evidence of smoking; we did find evidence of trauma. Therefore, it is actually reliable; to a reasonable degree, probably it's debatable.

Q. I really would like to just focus on the questions I am asking. I am not trying to understand your opinions on how someone can

die of neck compression, the circumstances under which that can happen. Not specific to this case, not specific to the events at issue here, but just under ordinary circumstances your knowledge about how death from neck compression can occur. In particular, I would like to understand whether an individual who suffers neck compression will die at the time of that neck compression or whether the neck compression can happen and then some period of time in between and then later that person dies?

So, again, let me try and ask the question in a different way: If someone suffers from neck compression but does not immediately die of that neck compression, and, in fact, has an interval where they are walking and talking, under what circumstances could the individual nonetheless die later and you would attribute that to the neck compression; what circumstances?

MR. LAUFER: Objection.

You can answer.

A. It depends on a proper autopsy.

Dr. Hua

Proper classification is to die of something or die with something, which can apply to either neck compression or previously heart disease.

There is no such thing as one size fits all. Only a non-professional will look for a simple answer like this. That's why you need an autopsy, to look at an actual case. A theoretical case, you have a theoretical case and no answer.

Q. I am trying to understand your view on this particular issue, and if it's not a simple answer, then please, walk me through all the details, but what I would I like --

A. As I indicated, a theoretical scenario has a theoretical meaningless answer. We have the case. We have the neck injury, significant amount. We have the petechiae, significant amount. We have the documentation of no acute intoxication, no fatal natural diseases. Yes, he has a disease, he is more prone to die, yes, there's no question about that, but he did not have a fatal disease and die at age of 30-plus by himself.

Dr. Hua

Q. Again, I understand your views on the utility of my questions, but I would again just ask that you answer my questions. My questions right now are not about this particular case, my questions are about individuals who suffer neck compressions generally.

My question for you is: You seem to be stating that there are circumstance under which an individual can suffer neck compression and then have a period of time where they are lucid, walking around and talking and then subsequently suffer death. I would like you to explain the circumstances under which that can happen?

A. A hypothetical theoretical case does not have a hypothetical reliable answer. That's not something, as a practitioner of forensic pathology, I would do. I look at the individual case, the actual facts of the case to decide.

Q. That doesn't answer my question though.

A. I answered your question repeatedly

already.

MS. SIMON: Can we go off the record for a second.

(Discussion held off the record.)

MS. SIMON: Let's go back on the record.

BY MS. SIMON:

Q. If a healthy adult suffers neck compression that is sufficient to cause death, are there any circumstances under which that death would not happen at the time of the neck compression but rather some point later after a lucid interval where the individual is walking and talking.

A. There is no specific answer. It really depends on how healthy the healthy was. If someone is perfectly healthy, like I indicated before, 18 years old, no other diseases, no documented diseases confronts subsequently by autopsy examination or doctor's examination, then the chance of die suddenly off a lucid interval, it's extremely unlikely.

If someone has preexisting disease of

any sort, if subsequently confirmed by autopsy or by his or her physicians, you are dealing with a different outcome. The bottom line is we are dealing with a combination of factors, injury as well as natural diseases. That's what we're dealing with every day. The question is, did he die of the neck trauma or die with the neck trauma or die of heart disease versus die with heart disease -- that's a tough condition. We try to get as much information possible to get that conclusion.

That's why I suggested if toxicology is really your concern, do more toxicology. I mean, if heart disease is your concern, instead of sending the one section of heart, submit more sections of the heart. I mean things can be done, but the thing is we are dealing with this autopsy report; that's all we have.

Q. Okay. I think I understand your answer.

What I would like to know now is if the scenario I described is unlikely in a

healthy adult but could happen in an individual with a preexisting disease, as you say, what preexisting diseases are you talking about?

A. A preexisting heart disease, preexisting seizure disorder, preexisting lung disease would put you in a much tougher position, vulnerable position, as compared to having a preexisting amputated leg, that has nothing to do with that. It really depends on what the specific condition is you're dealing with.

If someone has diabetes, has a stress, him or her are in big trouble. If someone has a preexisting congenital heart disease, arrhythmia of any sort, a stress activity will put you in a much vulnerable position. It's really dependent on individual cases.

Specifically you're dealing with diseases, dealing with brain, heart and lung. I could care less if you have amputated leg because it's not particularly relevant. If you have diabetes, yes; seizure disorder, yes;

asthma, have preexisting asthma and lung diseases, you are much more vulnerable. If you are preexisting cardiac arrhythmia, you're much, much more vulnerable condition, but you are picking off whichever part you are picking.

It's a stressful compression on the neck. It's whatever you're picking. Without compressed neck you are not going to die if you're defining perfectly healthy people. With a preexisting disease they're in a much more vulnerable position.

Q. I just wanted to make sure I understand a piece of what you are saying.

You are suggesting that under normal circumstances with a healthy individual, if sufficient force is applied to the neck to cause death, death would ordinarily occur right then. In other words, it would be unlikely, to use your words, that there would be an interval between his death and a lucid interval in between the compression and death.

But I think if I understand what you are saying, it's that if you have a

preexisting disease, one of the ones you have identified is a heart disease, under those circumstances, you are suggesting it could happen there would be this lucid interval, somebody's walking and talking between the neck compression and their death; did I understand that correctly?

MR. LAUFER: Objection. You can answer.

A. That's not what I said.

I said if you had a preexisting disease, specifically dealing with heart, brain, lung, that will put you in a vulnerable position. When you say "heart," you can have previous heart attack; if you have previous hypertension, severe hypertension, severe coronary artery disease, a congenital arrhythmia to start with.

Q. I understand that. I am trying to focus on a particular aspect of what you are saying when you mentioned heart disease. I want to make sure I understand you.

Clearly, you are saying that they're vulnerable. I am trying to understand what

you mean; what are they vulnerable to?

A. Vulnerable in terms of their unhealthy heart, lung or brain, as compared to the irrelevant as a foot amputation due to trauma, which would be irrelevant, but it's not healthy either. If you have foot amputation due to trauma you are not healthy either, but it's irrelevant.

Q. What I am trying to understand, Dr. Hua, and I realize you don't -- I'm trying to be very careful in how I paraphrase what you are saying, but it seems I am not quite understanding what you are saying still.

I am still trying to work out the circumstances under which an individual could suffer neck compression sufficient to cause death but not right away. It seems you have listed several circumstances that would make someone more vulnerable to that situation; is that correct?

A. I have listed specifically brain, heart, lung condition as compared to your previous traumatic amputation of the leg, which is not relevant.

Q. Setting all of those conditions aside, with the exception of heart disease, I would like to focus your attention on the heart disease example you gave.

A. If you're suggesting lung disease is irrelevant, that's your argument.

Q. Just set it aside for the moment. That's not what my question is about. Just focus on my question.

My question is with respect to heart disease, how could heart disease impact the timing of whether someone died immediately from neck compression or instead had a lucid interval walking and talking and then subsequently died?

A. A heart needs beating, needs oxygen just like a brain; it needs constant supply of oxygen. If being strangulated, your brain suffers an episode of lack of oxygen, therefore, that makes you more loopy -- somewhat conscious, but not in perfectly tip-top condition because of lack of oxygen to your brain, which makes you more vulnerable to have -- because your brain eventually has

control over your heart, just like people with seizure disorder, as brain-disease people die of heart disease eventually.

Therefore, damage to the brain due to asphyxia, due to mechanical asphyxia, due to neck compression puts you in another category of vulnerable. If you have a previous vulnerability, one plus one will certainly be more detrimental to your health.

Q. Again, still looking only at the heart disease example that you mentioned.

A. Is this a question?

Q. Just a moment. I am trying to phrase them very carefully so we can try to make some progress.

Again, looking only at a heart condition example that you have mentioned, the heart disease example; are you saying that someone who suffers neck compression and suffers from heart disease is more likely to die from that next compression or are you saying that the individual -- scratch that.

MR. LAUFER: Maybe "vulnerable," maybe you want to use that word.

Dr. Hua

Q. Dr. Hua, speaking still about the heart-disease example you just mentioned, I believe you mentioned that that would make an individual more vulnerable under the circumstances we are describing.

What I would like to understand is the following: Why, if this is what you're saying, why would the existence of heart disease make it more likely that someone would suffer neck compression and have a lucid interval and then die, as compared to a healthy individual?

A. Healthy individual with neck compression or without neck compression?

Q. I believe you said in the case of a healthy individual it's unlikely that that individual would suffer neck compression, have a lucid interval -- -

A. No.

Q. Dr. Hua, it's a long question, so if you could just wait for me to indicate that I am done, that will be helpful.

My understanding from your prior testimony is that in the case of a healthy

individual, it's unlikely that they would suffer neck compression sufficient to cause death, but have a lucid interval between the actual compression and the death, but you indicated, if I understand you correctly, that certain diseases might make someone more vulnerable to that scenario. In other words, more vulnerable to the scenario where they suffer neck compression sufficient to cause death but do have a lucid interval and then subsequently die and I would like to understand why. That's the question.

A. I counted about six different questions.

As I indicated before, it doesn't matter how healthy you are, everyone can suffer severe neck injury. The result depends on what's the duration of the neck injury. If the duration is short enough, it's not going to be fatal.

If you have preexisting diseases to make you more vulnerable, it's mainly because neck compression causes a lack of oxygen. Your heart is eventually under the control of

your brain. If brain, lack of oxygen really has a deficiency in terms of control of the proper function of your heart, then you're in a much vulnerable position.

Therefore, I listed three different categories of diseases we pay particular attention to: One is preexisting brain disease; second is preexisting heart disease; third is preexisting lung diseases, because lung diseases can cause you compromised oxygen intake as compared to a traumatic leg trauma which is irrelevant.

Q. I don't think you are answering my question. I'm not asking whether they are more vulnerable to death from neck compression. What I'm asking is: Is it more likely that there would be a situation where they suffer the neck compression sufficient to cause death, but there is a lucid interval before they actually die in someone with heart disease?

A. It depends on the duration of the lucid interval. If the lucid interval is within a couple of minutes or a couple of

seconds, we, as forensic pathologists in general, we attribute the previous neck compression. If the lucid interval will prolong it with a couple of days in between, that will be irrelevant.

Therefore, Dr. Hammers in this case did a good thing; microscopically she tried to date an injury or the neck injury turned to be fresh. That's why it's related, as compared to injury from a couple of days ago and it's totally irrelevant.

MS. SIMON: Monique, can you please read that back.

(Last answer read by the Reporter.)

Q. Dr. Hua, I think, again, I am just trying to understand what you're saying. So I think what you're saying is: If an individual has a lucid interval between the neck compression and death, and it's a few seconds or a few minutes, the death would still be attributed to the neck compression, but if the lucid interval is a couple of days, you would not attribute the death to the neck compression; correct?

A. That's a simple way to say it, yes.

Q. Well, is it accurate?

A. Yes.

Q. My question is: If the lucid interval were a couple of hours, would you attribute that the neck compression -- would you attribute the death to the neck compression or not?

A. Look at individual cases specifically; look at specific evidence specifically. I mean, one thing is having a preexisting condition, how severe the preexisting condition was, that would make a difference. Any other unknown preexisting condition, that will make a difference. I mean, a good autopsy should be able to address those questions.

Q. I am trying to be very precise.

If the lucid interval is a couple of hours between the neck compression and the death, what would you look for in the body that would allow you to determine that the person died of the neck compression despite the two-hour lucid interval?

A. I would be the first to tell you, without specific information I am not smart enough or qualified enough to be very reasonable, reliable, where accepted, commonly accepted answer to this question.

Q. In the case of Mr. Grant, do you know whether or not he was having a conversation with someone at the time that he collapsed?

A. I do not have that information. All the information I have is listed on my paragraph number 2, plus, Dr. Gill's report; that's a year later when I received it.

Q. If you learned that Mr. Grant was having a normal conversation in the immediate timeframe before he collapsed, would that affect your opinion in this case?

A. I would read the information in its proper context, give a reasonable, reliable well-sorted answer instead of curbside consultation.

Q. Is whether or not Mr. Grant was talking and having a normal conversation at the time of his collapse relevant to a determination about the cause of his death?

A. If proven to be reliable, yes.

It's one piece out of many pieces of puzzles, just like his petechiae, just like his extensive neck injury. It's one piece of evidence. You do not let one piece run over the whole case.

Q. How would it be relevant?

A. You have to evaluate in the proper context. You have to prove it to be reliable. If the same witness reported he was using drugs but did not really see it, did not identify the drug, it's the same what is reported as no injury, but he obviously had injury according to Dr. Hammers' report and her pictures. Then, you know, you have to look at the whole context. Was it reliable and valid?

It's one piece of evidence, reliable, unreliable, it's a definition. You have to look at it in this context before making the conclusion, it fits into the actual autopsy finding or not.

Q. If there were -- I am asking a hypothetical question: If there were credible

testimony that Mr. Grant was having a normal conversation just before his collapse, would that be relevant to your conclusions in this case?

A. I will read, review, think through, read into proper context with understanding the same witness probably says he was using drugs and that was unconfirmed as well.

Q. That is not my question.

I am saying that if a credible witness testified that this individual, Mr. Grant, was having a normal conversation at the time that he collapsed, would that affect your opinions in this case?

MR. LAUFER: Objection.

A. I would evaluate it. Whether it's credible or entirely incredible. If there's a piece of evidence presented to me, I would evaluate it accordingly, but the main reason is to see whether it fits into the autopsy finding or not.

Q. If you determined that the testimony was credible, how would you proceed?

A. Credible only in terms of consistency

with the actual autopsy finding. If the witness, same witness thinks he was using drugs, but we cannot fine the drugs, I will suggest go do more testing. If they are reliable, then they're reliable. If they are not reliable, that will be the evidence or the discrepancy.

I need to look at the whole evidence in the context of this case to give a well-sorted, reasonable answer instead of a curbside, unsubstantiated, unreliable "yes" or "no" answer.

Q. If there were video of Mr. Grant having an ordinary conversation before his death, would it change your finding in this case?

A. I will review it first, then decide if it would change my finding or not.

MR. LAUFER: Counsel, are you in possession of that video, of that?

MS. SIMON: I am asking Dr. Hua a hypothetical.

A. I told you, I would review it, decide if it was consistent or inconsistent, relevant

or irrelevant, minimally irrelevant or strictly relevant, we have to look at it in the context instead of a curbside, typically unsubstantiated, unreliable comment. It's pure misleading, unless you want that.

Q. I am asking you to do that review now.

The additional piece of information that I am asking you to consider in this hypothetical is that Mr. Grant was having an ordinary conversation at the time he collapsed. I am asking you, with that additional piece of information, whether that would affect your opinions in this case?

A. I will have to review it first in it's proper context.

Q. I am asking you to do that now. Please consider that additional information in this hypothetical question that I am proposing to you.

A. I will review the evidence, if that's the evidence that you have. Just like I received 332 pictures; I will be annoyed if someone gives me 50 pictures. I need to

review the evidence, not your word. I am sure you tried to say as factually true as possible, but as a professional I need to review the actual evidence instead of accept or deny your opinion. Either way, that's wrong.

Q. I am asking you a hypothetical. I understand it's not present in the record.

A. I am not smart enough to answer unsubstantiated hypothetical questions in the context regarding a specific case. I am simply not smart enough.

Q. Do you think Mr. Grant had a lucid interval before he died or are the types of injury such that you expect he died immediately?

A. I do not know. I was not given that piece of evidence. I want the evidence. I do not want someone's digested opinion. If you are suggesting you have a tape, I want to look at the tape in its proper context, make the original objective evidence before making my decision.

Q. That's not my question. My question

is: Based on the evidence that you have in front of you --

A. I do not make unscientific, unsupported conclusions under any circumstances.

Q. Let me ask the whole question, please: My question is based on the evidence that you had in front of you, the records that you had in front of you at the time that you wrote your report, did you form an opinion about whether Mr. Grant died immediately from the neck compression or whether there was a lucid interval?

A. My opinion is in Paragraph 13. It's a conditioned opinion in the absence of fatal or acute intoxication, fatal natural diseases, that's a condition, then he died of this.

I do not address the question of lucid interval or not lucid interval because I do not have the actual video tape that you alluded at. I do not have it, so I am not in a position to answer unsubstantiated questions or hypotheses which are meaningless in my view, maybe not in other people's corner.

Dr. Hua

Q. You concluded that Mr. Grant died of neck compression; correct?

A. In the absence of acute intoxication, which in my view was not fully ruled on yet. In the absence of fatal natural diseases, in my view, was not fully ruled on yet.

I am going give to you one example, people can die of myocarditis. Rule on to myocarditis, at least you send me five sections of the heart. Here we have one. We are not in the position -- we are dealing what you have.

I need to rule on; that's why my conclusion, it's a conditional conclusion. In the absence of that, fatal intoxication or fatal natural diseases, he died of neck compression.

Q. I am going to come back to that in a moment. I do want to be clear with what my question is.

Based on the hemorrhages and the other injuries evident in Mr. Grant's body, do you have an opinion or not about whether Mr. Grant would have died immediately after

that neck compression or whether a lucid interval was possible?

A. I do not have enough evidence for me to conclude either way. If the evidence exists, I want to review in its proper context instead of a digested opinion in one way or another.

Q. Going back to something that you said, looking at your Paragraph 13, did I understand you correctly that the autopsy did not rule out fatal intoxication?

A. If the attempt was done in 2015 unsuccessfully, attempt occurred again nine months after your report was completed, why now? Why not now? That's exactly my paragraph number 12 is about. If it still exists, do the testing.

Q. Based on the records available to you, can you rule out fatal intoxication?

A. Based on the records available to me, three toxicology reports, not detect anything. There's no evidence of intoxication as of now, unless you want to make an argument that absence of evidence is evidence.

Dr. Hua

Q. My question is: What additional testing would need to be performed to rule out fatal intoxication, in your view?

A. I will ask a reliable toxicologist, first. I mean, I agree with Paragraph 6 of Dr. Gill's report. I agree that no drugs were detected. It means not detected, it just simply means that; "not detected" means not detected.

If you try to say no drug detected, there must be a drug intoxication, it's just not the way I use my logic on.

Q. Other than the role of a reliable toxicologist, is there any other additional testing that you would expect to be able to rule out fatal intoxication?

A. Then ask two reliable toxicologists or three by that argument, because I am not a toxicologist. I am not qualified to make a reasonable, reliable suggestion here. If they did not see anything, it means no detectable intoxication.

Q. In the case of Mr. Grant, did you rule out a fatal natural disease?

Dr. Hua

A. The autopsy report, appears to me, does not find any significant fatal, stand-alone natural diseases, but in my view, it's my case, I will submit more sections of the heart to rule out the one common disease, myocarditis. I will submit genetic testing.

Here, specifically, Dr. Hammers mentioned specimen was retained but not tested. I think the exact wording was "molecular genetics," at the bottom of page 8 and first line page 9, the top of the page 9, there is one line here: "Heart, liver and spleen specimens are held for molecular genetic studies if needed in the future."

Obviously, the specimen is there, it should be tested. Someone is dead, it's not a lighthearted matter. It needs to be tested, it's as simple as that. If it was my case, I would.

MS. SIMON: I think I am wrapping up. If you can give me five minutes to look at my notes.

(Whereupon, a recess was taken.)

MS. SIMON: Back on the record.

Dr. Hua

BY MS. SIMON:

Q. Just a couple of questions.

Dr. Hua, the report that you have attached as -- I am sorry the report that's attached to Exhibit A, a three-page report, does that accurately state the basis of your opinions in this case?

A. My opinions in this case, yes. March 11, 2020, yes.

Q. Is there anything missing from the report that forms the basis of your opinion?

A. As of March 11, 2020, no, nothing in the report.

Q. As of today, is there anything missing in the report in terms of your opinion?

A. Add of today, no. If more toxicology, more microscopic examination was done, yes. If the alleged videotape you have, let me review it, yes.

Q. Just to be clear those questions were hypothetical.

Is there anything today, anything that you would like to change in your report,

other than the number of autopsy photographs that you reviewed that you previously mentioned?

A. Yes. Just page 2, I need to change it. The date is March 11th, 2020. Under Paragraph 2, the total photographs, autopsy photographs should be 322, instead of 338; and, also, the report's missing a paragraph 6.

I guess I'm just not good at the computer.

Q. Just to be clear. It's a typo in the paragraph numbering?

A. Yes, there is no paragraph 6 to start with; 5 followed by 7. I don't have good penmanship; I'm excused.

Q. In cases where you have acted as an expert in the past, has a court ever refused to consider your testimony for whatever reason?

A. No, a court has not. To my knowledge, the court based their decision based on the court's decision, but not to my knowledge, no.

Q. Dr. Hua, to your knowledge, has a

court ever discredited or rejected, found invalid or found your opinions to be without basis?

A. No one tells me that to my face, that's all I can say. I disagree and that's all fair game, but no one has told me no, that's not worth -- I don't know.

Q. Have you ever been sued for malpractice?

A. Not to my knowledge.

Q. Have you ever been the subject of any form of disciplinary action from an employer or a licensing board?

A. Not to my knowledge.

Q. Have you been investigated for professional misconduct?

A. Not to my knowledge.

Q. No further questions.

Thank you very much.

MR. LAUFER: Thank you, Doctor.

MS. SIMON: I will be providing the original transcript to Mr. Laufer, Dr. Hua; when you get it, if you can review it and indicate any errors within the 30-day time

Dr. Hua

frame that's in the rules. That's all.

THE WITNESS: If I can get it electronically, it's much easier instead of paper.

MR. LAUFER: Sure.

(Time noted: 4:55 p.m.)

Zhongxue Hua, M.D.

Subscribed and sworn to
before me this day
of , 2021.

Notary Public

I N D E X

E X H I B I T S

PRODUCTION REQUESTS

C E R T I F I C A T I O N

I, MONIQUE CABRERA, a Shorthand Reporter and notary public, within and for the State of New York, do hereby certify:

That ZHONGXUE HUA, M.D., the witness whose examination is hereinbefore set forth, was first duly sworn by me on March 26, 2021, via Zoom, and that the above transcript is a true record of the testimony given at that time and place.

I further certify that I am not related to any of the parties to this action by blood or marriage, and that I am in no way interested in the outcome of this matter.

IN WITNESS WHEREOF, I have hereunto set my hand this __ day of _____, 2021.

MONIQUE CABRERA,
Court Reporter

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I declare under penalty of perjury that I have read the entire transcript of my Arbitration taken in the captioned matter or the same has been read to me, and the same is true and accurate, save and except for changes and/or corrections, if any, as indicated by me on the DEPOSITION ERRATA SHEET hereof, with the understanding that I offer these changes as if still under oath.

_____

ZHONGXUE HUA, M.D.

Subscribed and sworn to on the ____ day of _____, 20 ____ before me.

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Notary Public,

in and for the State of

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